WHAT IS CLAIMED IS:

1. A composition comprising:

2'-deoxyadenosine analog which chemically decomposes in an acidic environment of the stomach; and

one or more components which inhibit the 2'-deoxyadenosine analog from decomposing in the acidic environment of the stomach by isolating the 2'-deoxyadenosine analog from the acidic environment of the stomach;

wherein the composition is suitable to be administered orally to a patient.

2. The composition according to claim 1 wherein the 2'-deoxyadenosine analog is pentostatin.

3. The composition according to claim 1 wherein the one or more components of the composition form an erodible matrix.

4. The composition according to claim 1 wherein the one or more components of the composition include an enteric coating.

5. The composition according to claim 4 wherein the enteric coating comprises a member of the group consisting of hydroxypropyl-methylcellulose phthalate, methacrylic acid-methacrylic acid ester copolymer, polyvinyl acetate-phthalate and cellulose acetate phthalate.

6. The composition according to claim 1 wherein the composition is a solid dispersion.

7. The composition according to claim 6 wherein the solid dispersion comprises a carrier selected from the group consisting of

polyethylene glycol, polyvinylpyrrolidone, hydroxypropylmethyl-cellulose, phosphatidylcholine, polyoxyethylene hydrogenated castor oil, hydroxypropylmethylcellulose phthalate, carboxymethylethylcellulose, hydroxypropylmethylcellulose, ethyl cellulose and stearic acid.

8. The composition according to claim 1 wherein the one or more components of the composition include an ion exchange resin that forms a complex with the adenosine analog.

9. The composition according to claim 1 wherein the one or more components of the composition include injectable micro spheres.

10. The composition according to claim 1 wherein the composition is in a form selected from the group consisting of pill, capsule, liquid, lozenge, and tablet.

11. A method for treating a patient comprising:

orally administering to the patient a pharmaceutically-effective amount of a composition which is adapted for oral administration and comprises:

a 2'-deoxyadenosine analog which chemically decomposes in an acidic environment of the stomach, and

one or more components of the composition which inhibit the 2'-deoxy adenosine analog from decomposing in the acidic environment of the stomach by isolating the adenosine analog from the acidic environment of the stomach.

12. The method according to claim 11 wherein the 2'-deoxyadenosine analog is pentostatin.

13. The method according to claim 11 wherein the one or more components of the composition form an erodible matrix.

14. The method according to claim 11 wherein the one or more components of the composition include an enteric coating.

15. The method according to claim 14 wherein the enteric coating comprises a member of the group consisting of hydroxypropyl-methylcellulose phthalate, methacrylic acid-methacrylic acid ester copolymer, polyvinyl acetate-phthalate and cellulose acetate phthalate.

16. The method according to claim 11 wherein the composition is a solid dispersion.

17. The method according to claim 16 wherein the solid dispersion comprises a carrier selected from the group consisting of polyethylene glycol, polyvinylpyrrolidone, hydroxypropylmethyl - cellulose, phosphatidylcholine, polyoxyethylene hydrogenated castor oil, hydroxypropylmethylcellulose phthalate, carboxymethylethylcellulose, hydroxypropylmethylcellulose, ethyl cellulose and stearic acid.

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18. The method according to claim 11 wherein the one or more components of the composition comprise an ion exchange resin that forms a complex with the adenosine analog.

19. The method according to claim 11 wherein the one or more components of the composition comprise injectable micro spheres.

20. The method according to claim 11 wherein the composition is in a form selected from the group consisting of pill, capsule, liquid, lozenge, and tablet.

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21. The method according to claim 11 wherein the patient has a disease selected from the group consisting of hematological malignancies, solid tumors sensitive to adenosine analogs or adenosine deaminase inhibitors, and autoimmune diseases mediated by adenosine or adenosine deaminase.

22. The method according to claim 11 wherein the patient has leukemia.

23. The method according to claim 11 wherein the patient has a leukemia selected from the group consisting of hairy cell leukemia, and chronic lymphocytic leukemia, chronic T-cell lymphoma, acute myelogenous lymphoma, hairy cell leukemia, and chronic lymphocytic leukemia.

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24. A method for treating a patient comprising:

orally administering in a controlled-release mechanism to the patient a composition which is adapted for oral administration and comprises:

a 2'-deoxyadenosine analog which chemically decomposes in an acidic environment of the stomach, and

one or more components of the composition which inhibit the 2'-deoxyadenosine analog from decomposing in the acidic environment of the stomach by isolating the 2'-deoxyadenosine analog from the acidic environment of the stomach.

25. The method according to claim 24 wherein the 2'-deoxy adenosine analog is pentostatin.

26. The method according to claim 24 wherein the controlled-release mechanism is selected from the group consisting of a reservoir system with a rate-controlling membrane, reservoir system without a rate-controlling membrane, monolithic system, and osmotic pump.

27. The method according to claim 24 wherein the controlled-release mechanism is selected from the group consisting of SODAS, INDAS, IPDAS, MODAS, EFVAS, PRODAS, and DUREDAS.

28. The method according to claim 24 wherein the one or more components of the composition form an erodible matrix.

29. The method according to claim 24 wherein the controlled-release mechanism is selected from the group consisting of a rate-preprogrammed drug delivery system, an activation-modulated drug delivery system, a feedback-regulated drug delivery system, and a site-targeting drug delivery system.

30. The method according to claim 24 wherein the composition includes an enteric coating.

31. The method according to claim 30 wherein the enteric coating comprises a member of the group consisting of hydroxypropyl-methylcellulose phthalate, methacrylic acid-methacrylic acid ester copolymer, polyvinyl acetate-phthalate and cellulose acetate phthalate.

32. The method according to claim 24 wherein the one or more components of the composition include an ion exchange resin that forms a complex with the 2'-deoxyadenosine analog.

33. The method according to claim 24 wherein the one or more components of the composition include injectable micro spheres.

34. The method according to claim 24 wherein the composition is in a form selected from the group consisting of pill, capsule, liquid, lozenge, and tablet.

35. The method according to claim 24 wherein the patient has a disease selected from the group consisting of hematological malignancies, solid tumors sensitive to adenosine analogs or adenosine deaminase inhibitors, and autoimmune diseases mediated by adenosine or adenosine deaminase.

36. The method according to claim 24 wherein the patient has leukemia.

37. A method according to claim 36 wherein the patient has a leukemia selected from the group consisting of hairy cell leukemia, and chronic lymphocytic leukemia, chronic T-cell lymphoma, acute myelogenous lymphoma, hairy cell leukemia, and chronic lymphocytic leukemia.